Does Internet access to official data display any regularity: case of the Electronic Data Delivery System of the Central Bank of Turkey

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Abstract

1990s were the years of enormous growth of information exchange. Rapid development, augmented coverage and wide accessibility of Internet have been the key factors of that amazing growth. People's access to economic and financial data was one of the major areas in which new trends and patterns of usage were observed. Owing to the elevated importance of financial information in today's sophisticated markets, it is hypothesized that the linkage between data access patterns and economic events should display some regularity. In addition, one should be able to explain part of the irregularities. This study examines the access statistics of the Central Bank of Turkey's Electronic Data Delivery System on these grounds. Using OLS and EGARCH models, significant evidence was obtained for the existence of regularities (i.e. calendar effects) in the data.

***JEL Classification**:* C50 and G10.

***Key Words**:* Data access, Macroeconomic data, Return to information, Economics of information.

1. Introduction

It is common knowledge for a long time that what is priced in financial markets is information rather than the content of the information. At the bottom line, assets are traded and priced in financial markets but the amount and quality of information on these assets seem to gain an ever increasing importance. Moreover, general economic data have gained an enormous pace both in terms of volume and coverage. It is common understanding (or belief) that more and more information shall yield higher market efficiency.

1990s were the years of enormous growth of information exchange. Rapid development, augmented coverage and wide accessibility of Internet have been the key factors of that amazing growth. People's access to economic and financial data was one of the major areas in which new trends and patterns of usage were observed.

Information has never been as important as it is today. In line with the development of major governance principles, such as transparency and accountability, information became the central asset of practically all markets. In this conjuncture, economic agents are faced with independent institutions which regularly provide data on their policy actions. For instance, the world wide monetary policy practice is more or less based on the principle of central bank independence. There has been an array of studies highlighting its implications in terms of transparency, accountability, and finally, economic performance.

Importance of data dissemination, then, is discussed under improved governance. Indeed, it is practically impossible to be independent, transparent and accountable without state of the art data dissemination and delivery.

Owing to the elevated importance of financial information in today's sophisticated markets, it is hypothesized that the linkage between data access patterns and economic events should display some regularity. In order to come up with a solid understanding of these issues, one should examine whether people really access official statistics, what the extents of use are and whether these tell anything at all.

More importantly, if we expect some regularity, we may fairly expect some irregularities, as well. It is also important then to explain whether these irregularities are connected to economic events.

This study examines the access statistics of the Central Bank of Turkey's Electronic Data Delivery System on these grounds. In Section 2, we introduce the Electronic Data Delivery System (EDDS) of the Central Bank of Turkey (CBT). Section 3 is devoted to develop the main framework of the study and empirical analysis is elaborated in Section 4. Finally, Section 5 concludes the paper.

2. Electronic Data Delivery System of the Central Bank of Turkey[1]

EDDS is a dynamic and interactive data dissemination system providing access via Internet to the statistical data produced and/or compiled by the CBT. Access and usage of this system do not necessitate any additional hardware or software. The system is completely free of charge and operates a free of charge subscription and an alert system as well.

[1] For more information on EDDS see http://evds.tcmb.gov.tr/yeni/cbt-uk.html

EDDS is accessible round the clock. Data updates are made every day at 16:30 and the access is not interrupted during this operation. The subscribed data and the update notifications are sent automatically around 19:00 via e-mail.

The system allows the users to choose data groups or individual time series and provides them with access to the data in their original frequency as well as the possibility of conversion between frequencies (aggregation and distribution). The user can use a time series at annual, semiannual, monthly, weekly, daily or business-daily frequencies, wherever possible. If the series is going to be retrieved in a frequency other than its original one, the conversion technique, such as constant, discrete, linear or cubic, can also be chosen. The observational basis for conversion can be the original observation, averaged, beginning, ending, high, low or summed. In addition, the system has implemented an array of well-known functions such as, level (original data), percentage change, percentage change per annum, year-to-year difference, period-to-end of previous year percentage change, period-to-end of previous year difference and moving average. These changes and differences can be displayed in tabular and graphical formats. The user can also determine the number of the decimal places. In sum, the system facilitates a wide range of data manipulation tools.

EDDS outputs can be in several forms. The user may view data directly on the screen, interactively generate graphs, get an HTML display of the data tables, download data as a comma separated file or send the queried data to his/her e-mail address.

The system has evolved from a series of manual process into an exemplary electronic service through the years. Before EDDS was introduced, the statistical data needed by various institutions and real persons were sent in the form of hard copy or magnetic tapes and floppy disks. Such methods could cause delays, which make the data become out of date. Furthermore, it was necessary to allocate human resources to meet the different demands of every individual user.

On these grounds, preparations for Electronic Data Dissemination System began in 1992. It was planned to set up a Bulletin-Board system and to make it possible for the users to access the data by dialing up, and to display and download them with the aid of menus. The choice of the hardware and software to be employed was completed and implementation and development were begun in 1993.

The first version of the EDDS was designed as a character based application and 500 time series were prepared for access by the users. Following the Internet access by the CBT along with Middle East Technical University, TUBITAK (the Scientific and Technical Research Council of the Republic of Turkey) and some other universities in 1994, EDDS was rearranged to serve also as a telnet implementation. Preparations for this were completed in 1994 and the system was opened to public usage on January 4, 1995. During the course of time, the number of the registered users has exceeded 2500.

Due to the difficulties in using character based systems, the growing requirements and the technological developments, the system was redesigned to include web based features and graphical representation and the new system was made available in 1988. On this date the number of time series was about 1800, which now exceeds 35000.

3. Preliminary Framework

3.1. Economic Characterization of EDDS Data

It is interesting to characterize the nature of the EDDS data. EDDS data are non-rival and non-excludable in its very nature. Non-rivalry implies that use of data by a set of users does not make others' access to data impossible. Non-excludability, on the other hand, implies that no user can be prevented from using the disseminated data by any pre-defined rule. Hence EDDS should be seen as a public good rather than an economic good.

CBT solely acts as the distributor of the data except for a few cases. For example, in the case of price indices, TURKSTAT (Turkish Statistical Institute) is the original compiler and distributor of the data. CBT, however, disseminates the same data in a more user-friendly format and several alternative time-series presentations can be generated through EDDS. CBT has no monetary obligations to TURKSTAT in this case. The same applies to data series like budget statistics or Treasury's debt statistics. In some cases like consumer expectations surveys or business tendency surveys, the CBT is the owner of the data series generated. These surveys are performed by TURKSTAT where the costs are covered by the CBT. In either case, a public good is both financed and provided by the public sector.

Apart from these, management of a huge volume of data requires very rigorous efforts all of which are made by the CBT. In that sense, the CBT facilitates all necessary financing.

3.2. What are the Determinants of Data Access?

It is intuitive that access to financial data is or should be closely related to economic and technological developments. Fundamental analysis of economic events has always been of remarkable interest. In addition, the development of the data resources and facilitation of new access channels especially in the last three decades helped numerical analysts in a number of ways. Formally, we treat the access to online economic data supposing that it can be decomposed into two major components: One reflecting the natural (or baseline) trend of data access while the other reflects the deviations from the trend. Such a treatment, indeed, not only helps us to understand the dynamics of data access better, but also helps us to establish numerical models.

Regarding the natural (or baseline) trend of online data access, three major underlying sources can be addressed. The first one is the evolution of the general trend in Internet access. It is a well-known fact that, especially after 1995, the Internet became the major source of reference in many areas. Development of new hardware and software tools, declining cost of data storage and transmission and rapidly increasing reliability of Internet made more and more people to access the Internet-based resources. The second source of the baseline trend is the evolution of the content in terms of coverage. For instance, in the case of EDDS as time passes more data series are disseminated. Enriched coverage should be then implying an increased pace and volume of data access. Finally, improved policy making framework and increasing extent of transparency should be seen as another source of the baseline trend.

More importantly, Internet-based production of information is a self-augmenting process, that is, once a piece of information is disseminated through the Internet, almost all subsequent references to this information are also carried out over the Internet. Intuitively, this process should be displaying an exponential growth pattern. In empirical terms, one can imagine this pattern as a long-term trend series which is to be extracted out of original data access data.

On the other hand, an understanding of the baseline trend, even if it is quite sophisticated and appealing, may not be enough. Our research, hence, should be appropriately addressing the deviations from the baseline trend. This is because of the expectation that deviations from the baseline trend should also include some regularity.

We refer to three main sources of deviations. The first source is referred to as the calendar effects. This source simply covers the day of the week effects and holiday effects, where both national and religious holidays are considered. The second source of deviations is named as dissemination effects. Effects of the data dissemination calendar and policy announcements on the data access counts constitute the dissemination effects. The last source of deviations is about the periods of elevated uncertainty. Episodes of political and economic tension establish the basis of deviation in that respect. Domestic and international episodes of tension as well as episodes of economic crises are, therefore, covered.

4. Empirical Analysis

4.1. Data and Descriptive Statistics

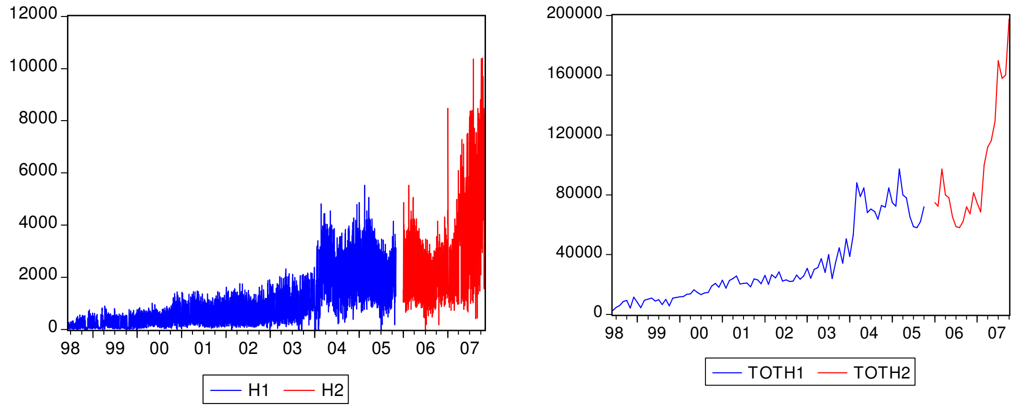
Usage data on EDDS have been available for the period from June 12th, 1998 to October 31st, 2007. However, there has been no documented reason as to why the dissemination of that series was suspended. Furthermore, usage data are discontinuous from November 1st 2005 to December 31st 2005. This black-out period imposes some limitations on empirical analyses.

The EDDS usage data does not give any clues on whether the access counter removes records of multiple access from the same client IP within a short period. In addition, access statistics for individual data items is not provided. If such data were at hand, it would be more meaningful to conduct such an analysis, yet what is at hand may suffice.

Descriptive statistics and evolution over time of the EDDS usage data are provided in Table 1 and Figure 1 through 3.

Figure 1. Number of EDDS Queries – Original Data

Daily Observations **Monthly Observations**



Left – Blue segment (H1): June 12th 1998 - November 1st 2005, Red segment (H2): January 1st 2005 – October 31st 2007. Right – Same periods, monthly totals.

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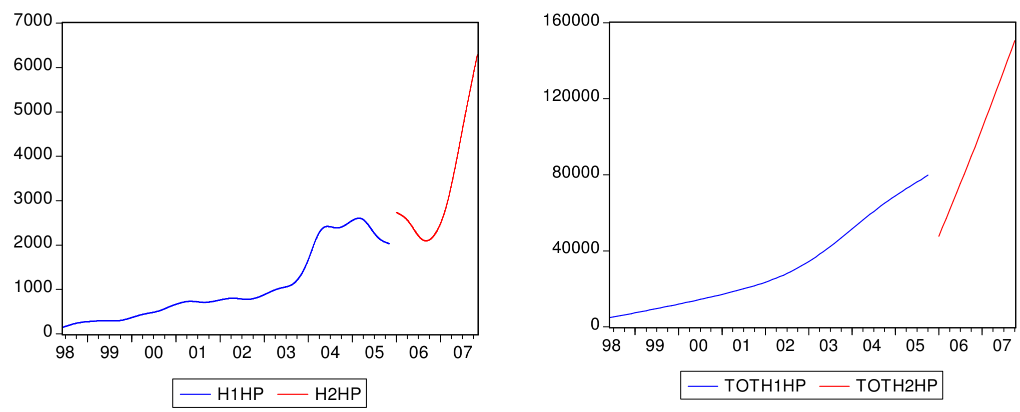
Figure 2. Number of EDDS Queries – Baseline Trend

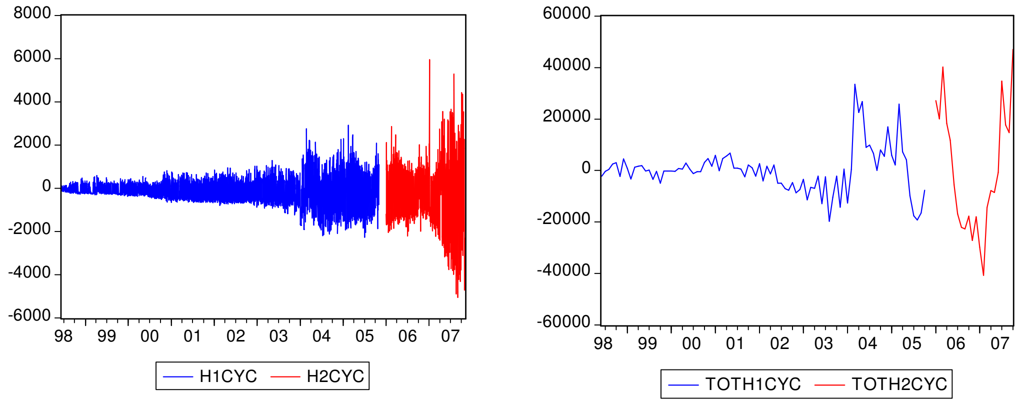
Daily – HP Filtered **Monthly – HP Filtered**



Left – Blue segment (H1HP): June 12th 1998 - November 1st 2005, Red segment (H2HP): January 1st 2005 – October 31st 2007. Number of queries was subject to HP filter separately for the two periods. Notice that the slopes of the two segments do not match due to the end point bias of HP filter. This panel resembles the right panel of Figure 1. Right – HP filtered monthly totals. Quality of the filtered series remains low in this case. This panel is provided for convenience.

Figure 3. Number of EDDS Queries – Deviations from Baseline Trend

Deviations from Daily HP Trend **Deviations from Monthly HP Trend**



Left – Blue segment (H1CYC): June 12th 1998 - November 1st 2005, Red segment (H2CYC): January 1st, 2005 – October 31st, 2007. Right – Same periods, deviations from monthly HP trends. In this figure, deviations are given in terms of daily data access counts. In the estimations, logarithmic convention is used so as to interpret deviations as *percentage deviations*.

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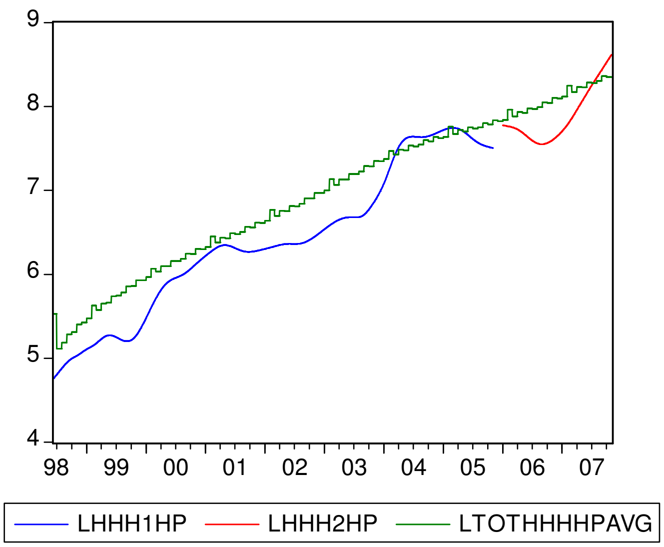
Table 1. Descriptive Statistics of EDDS Access Data

	Daily			Monthly		
	H	**H1**	**H2**	**TOTH**	**TOTH1**	**TOTH2**
Mean	1489.69	1061.28	3218.05	45200.77	32184.37	97858.05
Median	979.00	766.00	2863.00	26580.00	23236.00	78938.00
Max	10402.00	5523.00	10402.00	197529.00	97224.00	197529.00
Min	0.00	0.00	0.00	2695.00	2695.00	58156.00
Std. Dev.	1539.29	1012.16	2017.88	38717.69	24809.48	40620.97
Skewness	1.92	1.31	1.11	1.45	0.99	1.11
Kurtosis	7.88	4.06	3.94	5.34	2.69	3.03
Jarque-Bera	5408.42	898.62	163.06	64.34	14.81	4.49
Sample Size	3368	2699	669	111	89	22

Descriptive statistics are provided for both daily and monthly data. H and TOTH: June 12th, 1998 - October 31st, 2007, H1 and TOTH1: June 12th, 1998 - November 1st, 2005, H2 and TOTH2: January 1st, 2005 – October 31st, 2007.

Figure 4. Baseline Trend (HP) and Monthly Averages



Blue segment (LHHH1HP): June 12th 1998 - November 1st 2005, Red segment (LHHH2HP): January 1st, 2005 – October 31st, 2007. Green line (LTOTHHHHPAVG) has been obtained as the HP filtered version of the (natural logarithm of) monthly data access figures, graphed against the daily horizontal time axis. While obtaining this, missing November 2005 and December 2005 data were taken as equal to those of October 2005 and January 2006, respectively. All numerical figures are natural logarithms. Realize that the green curve has a secular trend where the other curves display more variation owing to the fluctuations in daily data.

The other variables used in analysis are basically calendar variables: D1, D2, D4, D5, D6 and D7 are binary dummy variables for the days of the week. D3 is not included in the analysis to avoid dummy variable trap and it establishes the basis for comparisons. DD1905, DD2304, DD2910 and DD3008 are dummies for the four national days of Turkey. DDNYR is the New Year's Day dummy. DDRAM and DDRFEST are for the month of Ramadan and the religious festivals.

CHRONO indicates the major social, political and economic events. It takes the value of 1 on a certain date if that date involves such an event. For the unexpected events this definition seems acceptable. Even in that case the event can be trailed by some more days for its effects to disappear. Furthermore, if an event is expected some more days, this may be leading the exact day of happening. In order to address these issues, CHRONO2 is defined. CHRONO2 takes the value of 1 for one-off events on the day of the event. Four days of leading and trailing windows were also introduced depending on the impact span of the events.[2]

4.2. Model

Empirical assessment of the access to EDDS data follows the main points made in the previous section. In our main models, we address the deviations of EDDS data access figures from its baseline trend. For robustness check, daily percentage change of EDDS data access figures is also considered.

Regarding the baseline trend, there is no solid reason for not assuming that general trend in Internet data access simply follows a geometric growth path. An autoregressive process might facilitate the process fairly well. By using an autoregressive functional form, one can incorporate the general trend in Internet access into the picture. Nevertheless, content

[2] A full list of the covered events and arrays of CHRONO and CHRONO2 are available from authors upon request.

growth and policy transparency may not be directly addressed unless there is specific data corresponding to them. Still, an autoregressive process is expected to cover –though in a latent manner- the main sources of baseline trend.

Deviations from the baseline trend are mainly modeled by introducing disturbances to the autoregressive process. These disturbances are defined in terms of binary dummy variables, which are quite handy in terms of statistical estimation and several inferences. These dummy variables are intended to span a quite large space of the day of the week effects, holiday effects and news effects.

Going into the details of the above-mentioned general approach to modeling, one should clarify what statistical form the estimating equations shall display. In specific, it is important how the variability in data is addressed and how residual terms are modeled. In this study, we employ the EGARCH method to estimate the hypothesized effects.

Let y_t be the dependent variable (it may be the stock return or any other variable) where t denotes the time. If the independent (or explanatory) variables at time t are denoted by vector Z_{1t}, an Exponential GARCH (Generalized Autoregressive Conditional Heteroskedasticity) model (EGARCH) is defined by the following set of equations:

$$y_t = \alpha_0 + \sum_{i=1}^{n} \alpha_i y_{t-i} + \beta Z_{1t} + u_t \quad (1)$$

$$u_t = \sqrt{h_t} e_t, \quad e_t \sim i.i.d.(0,1) \quad (2)$$

$$h_t = \exp\{C + \gamma Z_{2t} + Q \log g_{t-1} + P \log h_{t-1}\} \quad (3)$$

$$g_t = |e_t| - E|e_t| - Le_t \quad (4)$$

where e_t has identically independent generalized error distribution, with L and D standing for the asymmetry term and the scale parameter. The first equation is the mean equation and it is used to measure the key economic relationship of interest. The other equations facilitate the dynamics of the residuals, where the third equation is often named as the variance equation. In the variance equation, exp stands for the inverse of the natural logarithm operator; C stands for the constant term; Q is the coefficient on the lagged squared residual; and P is the coefficient on the lagged squared variance. The variables packed in the vector Z_{2t} are the variance regressors and can include anything that of interest. Z_{1t} and Z_{2t} are not necessarily different.

Here the benefits of using such a specification are two-fold. Firstly, it allows us to account for calendar effects on both mean and variance specifications. Secondly, we can assess the asymmetric effects of surprises on the volatility. EGARCH specifications have some advantages over the GARCH models. Since we employ the logarithm of the ε_t term, the variance h_t will take positive values regardless of the values of the coefficients in the variance specification. Thus, no restrictions need to be imposed on the third equation for estimation except that of $P < 1$ for EGARCH, which makes numerical computation simpler. Secondly, the asymmetric behavior can be addressed by the coefficient L (Hamilton, 1994, pp.668-9). Especially in the context of stock prices, evidence on asymmetry in stock price behavior has been found by many researchers. The negative surprises seem to increase volatility more than positive surprises do. Since a lower stock price reduces the value of equity relative to corporate debt, a sharp decline in stock prices increases corporate leverage and could thus increase the risk of holding stocks. The general notion is that ε_t has a normal distribution, which is clearly too strong an assumption. Therefore, we have assumed that ε_t has a generalized error distribution.

As noted earlier, calendar effects constitute a major part of this paper. Remembering that one of the key questions of this paper is whether there was any pattern in the deviations of daily EDDS data access figures from trend, it is important to pinpoint the calendar effects appropriately. On the other hand, in the literature a large amount of efforts has been devoted to find out the same in a stock market context. Most studies investigating the day of the week effect on returns employ the Least Squares estimation method by regressing returns on five daily dummy variables. See for instance, Cross (1973), French (1980), Lakonishok and Levi (1982), Gibbons and Hess (1981), Keim and Stambough (1984), Jaffe and Westerfield (1985), Smirlock and Starks (1986), Abraham and Ikenberry (1994), and Agrawal and Tandon (1994). This has, however, two drawbacks. Firstly, the errors in the model may be auto correlated, which may result in misleading inferences. This problem can be addressed by including the lagged values of the returns, thus presenting the returns in terms of a constant term, lagged terms of return and the day of the week dummy variables. The second drawback is that the error variances may not be constant over time. This can be addressed by allowing variances of errors to be time dependent to include a conditional heteroskedasticity. Thus, error terms now have a mean of zero and a time changing variance of h_t, i.e. $\varepsilon_t \sim (0, h_t)$. Different models for conditional variances are suggested in the literature. Engle (1982) allows the forecasted variances of return to change with the squared lagged values of the error terms from the previous periods, which is known as Autoregressive Conditional Heteroskedastic Model (q) (ARCH (q)). The generalized version of ARCH (q) is suggested by Bollerslev (1986) and makes the conditional variance, h_t, a function of lagged values of both h_t and ε_t^2. This specification is known as GARCH (p,q) modeling.

4.3. Estimates

An array of models has been estimated in order to investigate the calendar effects on EDDS data access counts. The models range from OLS to EGARCH with variations with respect to inclusion of calendar effects in the specifications. Model estimates are displayed in Table 2 through Table 14. For convenience, structures of all the estimated models are summarized in Table 15.

Before going into details of estimates, it might be useful to elaborate on the meaning of estimated coefficients. One may remember that change in daily data access counts was previously interpreted as "return". That is, if the count is increasing on a certain day, it is taken as a sign of increasing benefit out of data, and vice versa. The coefficients of the variance specification, then, become indicators of risk. If the conditional variance is higher on a certain day, or for another categorical variable, this day is said to have associated with higher risk. Below the main findings are outlined.

Table 2 and Table 3: In our first model in Table 2, non-cyclical component of daily data access figures (deviations from HP-trend) is regressed on its lags and calendar variables. As one may realize, Wednesday dummy is omitted in order to avoid the dummy variable trap. Hence the Wednesday effect is already absorbed by the constant term. The effects of other days are then compared to that of Wednesdays.[3] Based on Table 2 and subsample 1, data access on Mondays is significantly more than on Wednesdays. Saturdays and Sundays have significantly lower data access counts.[4] All the national days except 30th of August display

[3] This convention applies in all other models, as well.

[4] Given that we employ a large data set, i.e. a couple of thousands of observations, the level of significance should be maintained as 1 percent. So we discuss the figures with respect to such ambitious level of statistical significance. The interested reader may follow estimates that are significant at 5 percent or 10 percent levels from the respective tables.

negative deviations from the trend. The same applies to religious festivals as a whole. New Year's Day has a negative effect, though it is significant only at 10 percent level.

Moving to the second subsample, i.e. from January 1, 2006 to October 31, 2007, Mondays and Sundays preserve their significant deviations whereas the other days do not have any significant effects. It is worth to note that Monday effect changes its sign, that is, where it was higher than Wednesdays in subsample 1; in subsample 2 the picture is reversed. Tuesdays seems to have a positive effect on data access in subsample 2, yet this effect is not significant. 19^{th} of May and 30^{th} of August do have significantly lower data access counts and other calendar variables remain insignificant. Saturday still has a negative coefficient; however, this coefficient is not significantly different from that of Wednesday. This may be a clue about the changing data download / usage habits.

Impact of chronological variables (captured by CHRONO and CHRONO2) is insignificant both in Table 2 and Table 3. However, the sign turns from positive to negative when we use percentage changes instead of the non-cyclical component. Repeating the exercise of Table 2 with daily percentage change of data access counts (displayed in Table 3) the results remain intact.

Table 4 and Table 5: Above-presented OLS estimates are useful in terms of providing us with a first clue about what is happening in the data. Nevertheless, owing to the very structure of the data these estimates do not possess enough reliability. The residual terms do not display the desired characteristics (tests not reported here). Therefore all the specifications have been tailored and re-estimated using EGARCH models.

In Table 4 – Panel I, subsample 1 estimates of the mean equation of our EGARCH model are given. Based on this panel, there is a positive Monday effect and there are negative Saturday and Sunday effects. Although Thursdays have a negative and Fridays have a positive effect, these are either not significant at 1 percent level or not significant at all. In subsample 1, all national days, religious festivals as well as the New Year's Day have lower data access counts, being significant at the 1 percent level.

In subsample 2, Monday effect reverses its sign while preserving its significance, Sunday keeps its significant negative effect. Saturday effect loses significance while preserving its negative sign. 19^{th} of May effect is intact and 30^{th} of August effect loses its significance in some of the specifications for subsample 2. 23^{rd} of April and 29^{th} of October both reverse their sign and turn into insignificant.

It is interesting that the effect of the month of Ramadan, which was positive yet insignificant in subsample 1, becomes positive and significant (at 5 or 10 percent level of significance) in subsample 2. Furthermore, the impact of religious festivals on data access reverses its sign in subsample 2. In Table 4 – Panel I, it has a significant (at 1 percent) and negative coefficient in subsample 1, whereas the effect becomes positive in subsample 2 (significant at 5 or 10 percent, or insignificant at all).

The findings of Table 4 – Panel I are supported by Table 5 – Panel I, where the estimation is repeated with percentage changes of data access counts.

Panel II of Table 4 presents the variance equation. In subsample 1, Thursdays, Fridays and Sundays have insignificant coefficients, whereas coefficients of Mondays and Tuesdays suggest mixed conclusions. Conditional variances of Saturdays do significantly differ from that of Wednesdays. New Year's Day, the month Ramadan and the religious festivals all reflect higher risk perception. National days, on the other hand, are not associated with a higher level of risk. Where CHRONO has an insignificant negative coefficient, CHRONO2 has a negative coefficient which is significant at 10 percent level.

In subsample 2, Saturdays lose their elevated risk to Sundays. However, conclusion on statistical significances is mixed. Effect of national days remains insignificant. Conditional variance on New Year's Day, the month Ramadan, religious festivals and for CHRONO2 turns to insignificant.

Findings of Table 4 – Panel II are affirmed in Panel II of Table 5, i.e. when estimation is performed using percentage changes instead of non-cyclical components of data access counts.

Table 6 and Table 7: What distinguishes Table 6 and Table 7 from Table 4 and Table 5, respectively, is the omission of the calendar effects from variance specification in EGARCH. Indeed, these models have been estimated for the sake of testing the overall significance of calendar effects in variance specifications of Table 4 and Table 5. One may realize that the calendar effects in mean equations of Table 6 and Table 7 are not much different from those of Table 4 and Table 5.

Table 8 and Table 9: Up to this point, the data have been treated as two subsamples, namely those of the June 12, 1998-October 31, 2005 (subsample 1) and January 1, 2006-October 31, 2007 (subsample 2). This segmentation of the sample was compulsory due to the blackout of data from November 1, 2005 to December 31, 2005.

On the other hand, such limitation in data should not necessarily be reflected to statistical outcomes. Despite there are good lessons out of estimating the specifications over two subsamples, one may still be curious about the whole sample estimates. Regarding this point, we have repeated the exercises in Table 2 through Table 7. The whole sample has been obtained by simply omitting the blackout period of data from the sample. In other words, subsample 1 and subsample 2 have been joined by shifting subsample 2 to past by 2 months (which is the length of the data blackout period).

Table 8 and Table 9 are the whole sample counterparts of Table 2 and Table 3 where the OLS estimates are displayed. Based on Table 8, all days have negative effects on data access counts. Among those, Thursday, Friday, Saturday and Sunday effects are significant at 1 percent; Tuesdays are significant at 1 percent or 5 percent; and Mondays are either significant at 10 percent or insignificant. These estimates suggest that Wednesdays generate the highest data access counts. All four national days and religious festivals also generate significant (at 1 percent) negative effects. New Year's Day has a negative effect (significant at 10 percent). Effect of the month of Ramadan and major chronological events are insignificant.

Table 9 replicates Table 8 by using the percentage change of data access counts as dependent variable. Except for the changing sign of month Ramadan, the findings of Table 8 remain intact in Table 9. At the end, it should be noted that these OLS estimates suffer from the same statistical drawbacks as those in Table 2 and Table 3 do.

Table 10 and Table 11: The EGARCH estimates for the whole sample are displayed in Table 10 and Table 11. In Table 10 – Panel I, estimates of the mean equation are given where dependent variable is the non-cyclical component of data access counts. Here, Mondays and Tuesdays have negative effects yet they are totally insignificant. Saturdays and Sundays have significant (at 1 percent) negative effects and Thursdays display a negative effect where statistical significance alternates between 1 and 5 percent. As opposed to Table 8 (OLS estimates) Mondays and Tuesdays are not distinguishable from Wednesdays in terms of data access counts. National days, religious festivals and major chronological events display the same pattern as in Table 8. However, the insignificant positive coefficient of the month of Ramadan in Table 8 turns into negative; yet it remains insignificant. The New Year's Day, on the other hand, maintains its negative coefficient with its significance elevated from 10 to 1 percent.

Table 11 replicates Table 10 by using the percentage change of data access counts as dependent variable. Table 10 – Panel I seems to be robust to this change.

Panel II of Table 10 suggests that Saturdays do have a significantly elevated conditional variance as compared to Wednesdays. For Mondays, Tuesdays and Fridays, the effect is negative though with mixed significance conclusions. Sundays, on the other hand, do not yield any significant difference from Wednesdays. National holidays and CHRONO do not have significant coefficients, either. New Year's Day, the month of Ramadan and religious festivals reflect a higher level of conditional variance. CHRONO2 has a negative coefficient that is significant only at 10 percent level. These findings remain the same when the estimation is done using the percentage changes instead of non-cyclical components.

Table 12 and Table 13: The connection between pairs of Table 12-13 and Table 10-11 is the same as between Table 6-7 and Table 4-5. The calendar effects in mean equations of Table 12 and Table 13 are practically the same as in Table 10 and Table 11.

Table 14: The basic EGARCH specification that we maintained throughout the paper has been regenerated in Table 14, using monthly data. Although this is a useful exercise, it has severe limitations such that calendar effects are no more applicable. However, it is possible to test whether major chronological events have significant effects or not. In that, CHRONO2 have a significant positive effect (at 10 percent) in the mean equation of non-cyclical component of data access. Despite the low significance, this seems to provide a valuable insight. At a monthly frequency, people's access to economic data is affected by the major economic / political events.

All in all, the "return" interpretation of the "changes in data access counts" proves useful in the sense that there exist some patterns in people's access to EDDS data. These patterns are not necessarily the same in our two subsamples. They are not necessarily the same in the mean versus variance equations, either. Nevertheless, simple models presented up to this point indicate that there might be an interesting and important volume of information embedded in the Internet data access to EDDS. Regarding important chronological events rather than ordinary calendar effects, there is some evidence that people visit EDDS more during and prior to important events. However, this evidence is not that apparent in daily data set and only be extracted from the monthly version of data.

5. Concluding Remarks and Further Research

This paper is aimed as a first attempt to investigate whether there can be specific patterns in Internet access to official economic data. Such motivation is not hand-made, since one can fairly expect that people access economic data based on some well-known factors: Data arrive with respect to a previously known calendar. Several economic decisions are announced on certain days of the week or month. People do have habits in certain weeks/months or on certain days of the week. All these factors seem to be enough for conducting formal analysis.

Existence of a long-run trend in data is more trivial. Owing to the developments in informatics, Internet-based technologies and improved access to physical infrastructure, people's access to online resources is already on a rapidly growing path. Merging this latter observation with the former one, this paper tries to understand whether the deviations of data access counts from long-run trend are significant or not.

Having estimated an array of specifications ranging from OLS to EGARCH, some significant patterns were observed in the data. In each of the cases of which we have employed subsamples or the whole sample, intuitive calendar effects were apparent.

Nevertheless, there are still some missing aspects to investigate. Among these, the most important is a special treatment of policy announcement effects. As this paper is a first attempt, these effects were omitted from analysis. Indeed, a more eloquent analysis of policy announcement effects would make the embedded patterns in data more visible. Definition of the data episodes (i.e. subsamples) is yet another important point. In the current study, we obeyed a natural crack in our data set, namely the unavoidable black-out of data during November-December 2005. Further research may identify some better-defined subsamples, probably based on regime changes of policymaking framework in Turkey.

At the very end, it should be admitted that direct economic (along both monetary and scientific dimensions) benefit out of this paper shall remain limited for some long time. Despite the concreteness of the subject matter, viability of the extracted information needs more detailed discussion and further elaboration.

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Table 2. OLS Estimates – Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	A101	**A102**	**A103**	**A104**	**A105**	**A106**	**A201**	**A202**	**A203**	**A204**	**A205**	**A206**
Constant	0.000190	0.165066	0.182696	0.206082	0.206101	0.200008	-0.001617	0.231892	0.246213	0.240576	0.242044	0.243787
	(0.9846)	(0.0150)	(0.0065)	(0.0016)	(0.0016)	(0.0023)	(0.9026)	(0.0002)	(0.0000)	(0.0002)	(0.0002)	(0.0002)
D1		**0.336462**	**0.310846**	**0.281721**	**0.281395**	**0.282194**		**-0.578430**	**-0.575847**	**-0.584391**	**-0.585345**	**-0.585309**
Monday		**(0.0050)**	**(0.0096)**	**(0.0153)**	**(0.0154)**	**(0.0152)**		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
D2		-0.145555	-0.155945	**-0.160649**	**-0.161648**	**-0.160603**		0.029380	0.020358	0.013584	0.015420	0.013494
Tuesday		(0.1451)	(0.1172)	**(0.0985)**	**(0.0965)**	**(0.0983)**		(0.7395)	(0.8188)	(0.8762)	(0.8603)	(0.8769)
D4		-0.056438	-0.069379	-0.059759	-0.059731	-0.058847		-0.046233	-0.069577	-0.063600	-0.065910	-0.065110
Thursday		(0.5588)	(0.4675)	(0.5113)	(0.5116)	(0.5175)		(0.5005)	(0.2931)	(0.3476)	(0.3324)	(0.3367)
D5		-0.016595	-0.023265	-0.042278	-0.043104	-0.042317		-0.154131	**-0.185033**	**-0.180237**	**-0.180873**	**-0.179700**
Friday		(0.8842)	(0.8358)	(0.7002)	(0.6949)	(0.7001)		(0.1666)	**(0.0748)**	**(0.0920)**	**(0.0927)**	**(0.0953)**
D6		**-0.767704**	**-0.767700**	**-0.786476**	**-0.788021**	**-0.786503**		-0.162704	-0.160016	-0.160391	-0.161229	-0.158930
Saturday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		(0.2083)	(0.2119)	(0.2293)	(0.2281)	(0.2357)
D7		**-0.504060**	**-0.520636**	**-0.546746**	**-0.547387**	**-0.546053**		**-0.723450**	**-0.719235**	**-0.723577**	**-0.724780**	**-0.723376**
Sunday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
DD1905			**-0.634156**	**-0.645824**	**-0.645249**	**-0.639021**			**-0.709322**	**-0.702318**	**-0.702626**	**-0.687831**
National H.			**(0.0001)**	**(0.0001)**	**(0.0001)**	**(0.0001)**			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
DD2304			**-0.625920**	**-0.633401**	**-0.632724**	**-0.633921**			-0.183055	-0.170162	-0.171857	-0.174558
National H.			**(0.0067)**	**(0.0066)**	**(0.0066)**	**(0.0064)**			(0.4451)	(0.4748)	(0.4710)	(0.4660)
DD2910			**-0.717849**	**-0.744778**	**-0.743991**	**-0.743004**			-0.071931	-0.070727	-0.072862	-0.075608
National H.			**(0.0010)**	**(0.0008)**	**(0.0008)**	**(0.0008)**			(0.6044)	(0.6098)	(0.5998)	(0.5846)
DD3008			**-0.611508**	**-0.603830**	**-0.603215**	**-0.603926**			**-1.219755**	**-1.214729**	**-1.215158**	**-1.216996**
National H.			**(0.0557)**	**(0.0653)**	**(0.0658)**	**(0.0671)**			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
DDNYR				**-0.964662**	**-0.977709**	**-0.978673**				0.069059	0.071035	0.069915
New Year				**(0.0765)**	**(0.0757)**	**(0.0720)**				(0.4310)	(0.4175)	(0.4249)
DDRAM				0.026231	0.026299	0.024825				0.053352	0.053338	0.050805
Ramadan				(0.4811)	(0.4802)	(0.5045)				(0.4029)	(0.4036)	(0.4245)
DDRFEST				**-0.569676**	**-0.569175**	**-0.565307**				**0.138999**	**0.137162**	**0.134862**
Religious H.				**(0.0000)**	**(0.0000)**	**(0.0000)**				**(0.0441)**	**(0.0467)**	**(0.0507)**
CHRONO					0.031767						-0.050422	
Key Events					(0.6122)						(0.5299)	
CHRONO2						**0.046242**						-0.035363
Key Events						**(0.0719)**						(0.3574)
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654
R2	0.694438	0.715268	0.720792	0.730078	0.730100	0.730356	0.671919	0.712267	0.729795	0.731301	0.731420	0.731568

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 3. OLS Estimates – Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	B101	**B102**	**B103**	**B104**	**B105**	**B106**	**B201**	**B202**	**B203**	**B204**	**B205**	**B206**
Constant	0.007245	0.165535	0.184416	0.211005	0.211014	0.206801	0.004958	0.232224	0.243522	0.240059	0.241965	0.245355
	(0.4827)	(0.0149)	(0.0060)	(0.0014)	(0.0014)	(0.0018)	(0.7154)	(0.0003)	(0.0001)	(0.0003)	(0.0003)	(0.0002)
D1		0.370584	0.341758	0.316597	0.316407	0.317165		-0.550220	-0.539683	-0.545170	-0.546553	-0.547702
Monday		(0.0024)	(0.0051)	(0.0080)	(0.0081)	(0.0080)		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
D2		-0.150235	-0.161684	-0.166677	-0.167324	-0.166694		0.059723	0.055589	0.051965	0.054126	0.050887
Tuesday		(0.1378)	(0.1085)	(0.0938)	(0.0926)	(0.0938)		(0.5110)	(0.5443)	(0.5650)	(0.5501)	(0.5719)
D4		-0.060864	-0.074033	-0.064659	-0.064643	-0.064059		-0.052758	-0.074321	-0.070728	-0.073624	-0.072963
Thursday		(0.5384)	(0.4485)	(0.4915)	(0.4917)	(0.4956)		(0.4594)	(0.2792)	(0.3120)	(0.2949)	(0.2950)
D5		-0.020664	-0.026824	-0.045478	-0.046010	-0.045515		-0.163566	-0.190957	-0.188226	-0.189018	-0.187353
Friday		(0.8560)	(0.8104)	(0.6797)	(0.6765)	(0.6798)		(0.1641)	(0.0840)	(0.0967)	(0.0968)	(0.0998)
D6		-0.773737	-0.774135	-0.792468	-0.793464	-0.792509		-0.168550	-0.165253	-0.165685	-0.166752	-0.163524
Saturday		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)		(0.2107)	(0.2163)	(0.2319)	(0.2301)	(0.2395)
D7		-0.474450	-0.493035	-0.516409	-0.516804	-0.515704		-0.723430	-0.715982	-0.719188	-0.720762	-0.719264
Sunday		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
DD1905			-0.713528	-0.733942	-0.733618	-0.729846			-0.745919	-0.742612	-0.742862	-0.719445
National H.			(0.0000)	(0.0000)	(0.0000)	(0.0000)			(0.0000)	(0.0000)	(0.0000)	(0.0000)
DD2304			-0.691873	-0.707564	-0.707170	-0.708455			-0.277391	-0.271946	-0.273688	-0.276320
National H.			(0.0030)	(0.0027)	(0.0027)	(0.0026)			(0.3095)	(0.3200)	(0.3172)	(0.3138)
DD2910			-0.755116	-0.767061	-0.766567	-0.766005			-0.055199	-0.053928	-0.056660	-0.061672
National H.			(0.0004)	(0.0005)	(0.0005)	(0.0005)			(0.7001)	(0.7063)	(0.6926)	(0.6646)
DD3008			-0.548825	-0.542023	-0.541590	-0.541631			-1.141053	-1.135577	-1.136406	-1.140814
National H.			(0.0983)	(0.1114)	(0.1118)	(0.1132)			(0.0000)	(0.0000)	(0.0000)	(0.0000)
DDNYR				-0.956028	-0.964421	-0.965685				0.072408	0.074872	0.073554
New Year				(0.0900)	(0.0908)	(0.0869)				(0.4031)	(0.3859)	(0.3946)
DDRAM				-0.028554	-0.028543	-0.029936				0.032242	0.032308	0.028809
Ramadan				(0.4477)	(0.4481)	(0.4262)				(0.6299)	(0.6297)	(0.6666)
DDRFEST				-0.524375	-0.524034	-0.521145				0.091405	0.089309	0.086362
Religious H.				(0.0000)	(0.0000)	(0.0000)				(0.1741)	(0.1827)	(0.1985)
CHRONO					0.020432						-0.063561	
Key Events					(0.7492)						(0.4616)	
CHRONO2						0.031754						-0.054505
Key Events						(0.2232)						(0.1888)
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654
R2	0.722622	0.741555	0.746885	0.754132	0.754140	0.754247	0.758018	0.786849	0.798789	0.799255	0.799391	0.799714

Explanations: (1) The optimal lag order is 35 for the Subsample 1 and 14 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 4. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	AA101	**AA102**	**AA103**	**AA104**	**AA105**	**AA106**	**AA201**	**AA202**	**AA203**	**AA204**	**AA205**	**AA206**
Constant	0.045968	0.181133	0.170688	0.184961	0.186212	0.188791	0.028218	0.243606	0.255452	0.230372	0.238950	0.241393
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
D1		**0.306340**	**0.318724**	**0.306096**	**0.302848**	**0.294399**		**-0.594587**	**-0.603577**	**-0.568015**	**-0.580003**	**-0.588811**
Monday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
D2		-0.053269	-0.044300	-0.049002	-0.049027	-0.057074		0.003142	0.013290	0.029869	0.028253	0.025772
Tuesday		(0.1957)	(0.2806)	(0.2473)	(0.2476)	(0.1798)		(0.9502)	(0.8035)	(0.5847)	(0.6140)	(0.6406)
D4		**-0.084620**	**-0.069471**	**-0.070939**	**-0.075157**	**-0.079407**		-0.009827	-0.036163	-0.021412	-0.030671	-0.032229
Thursday		**(0.0293)**	**(0.0783)**	**(0.0811)**	**(0.0649)**	**(0.0505)**		(0.8228)	(0.4320)	(0.6374)	(0.5078)	(0.4878)
D5		0.060278	**0.078379**	0.072363	0.074530	0.068543		**-0.116736**	**-0.122993**	-0.084626	-0.084675	**-0.105740**
Friday		(0.1970)	**(0.0930)**	(0.1336)	(0.1226)	(0.1560)		**(0.0380)**	**(0.0336)**	(0.1312)	(0.1420)	**(0.0601)**
D6		**-0.639153**	**-0.634252**	**-0.654151**	**-0.652744**	**-0.654916**		**-0.116444**	**-0.115317**	**-0.122166**	**-0.130289**	**-0.121741**
Saturday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		**(0.0402)**	**(0.0541)**	**(0.0417)**	**(0.0328)**	**(0.0403)**
D7		**-0.551130**	**-0.538768**	**-0.565334**	**-0.569100**	**-0.567655**		**-0.696556**	**-0.721750**	**-0.687119**	**-0.711333**	**-0.721918**
Sunday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
DD1905			**-0.835987**	**-0.840103**	**-0.839047**	**-0.837631**			**-0.811456**	**-0.798968**	**-0.800799**	**-0.803478**
National H.			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
DD2304			**-1.000323**	**-1.006658**	**-1.007941**	**-1.008115**			0.111460	0.111048	0.109867	0.107671
National H.			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**			(0.9331)	(0.9669)	(0.9449)	(0.8640)
DD2910			**-0.826876**	**-0.836309**	**-0.836103**	**-0.834011**			0.013868	0.053279	0.044035	0.070433
National H.			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**			(0.7826)	(0.6505)	(1.0000)	(0.4336)
DD3008			**-1.029072**	**-1.014579**	**-1.016401**	**-1.017343**			-1.010990	-1.013927	**-1.114852**	**-1.038307**
National H.			**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**			(0.3075)	(0.2491)	**(0.0000)**	**(0.0129)**
DDNYR				**-1.196385**	**-1.194006**	**-1.195863**				-0.179263	-0.013177	0.088036
New Year				**(0.0000)**	**(0.0000)**	**(0.0000)**				(0.8103)	(0.9386)	(0.1735)
DDRAM				0.005313	0.004486	0.002317				**0.056838**	**0.054556**	**0.054138**
Ramadan				(0.7615)	(0.7976)	(0.8937)				**(0.0416)**	**(0.0489)**	**(0.0551)**
DDRFEST				**-0.883481**	**-0.885615**	**-0.883935**				**0.099652**	**0.130247**	0.084973
Religious H.				**(0.0000)**	**(0.0000)**	**(0.0000)**				**(0.0838)**	**(0.0428)**	(0.1345)
CHRONO					0.004204						-0.061589	
Key Events					(0.9008)						(0.3352)	
CHRONO2						0.014311						-0.002139
Key Events						(0.2783)						(0.9304)

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 4. Panel II: EGARCH Estimates (Variance Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	AA101	**AA102**	**AA103**	**AA104**	**AA105**	**AA106**	**AA201**	**AA202**	**AA203**	**AA204**	**AA205**	**AA206**
D1		-0.118008	-0.224143	**-0.509030**	**-0.513189**	**-0.503631**		0.422513	**0.907443**	**0.929679**	**0.926243**	**0.996797**
Monday		(0.5397)	(0.2317)	**(0.0045)**	**(0.0045)**	**(0.0049)**		(0.2300)	**(0.0200)**	**(0.0126)**	**(0.0144)**	**(0.0082)**
D2		-0.297230	-0.246395	-0.291486	-0.268004	-0.282003		**-0.760547**	-0.350800	-0.316209	-0.316576	-0.179479
Tuesday		(0.2214)	(0.2949)	(0.1945)	(0.2333)	(0.2123)		**(0.0483)**	(0.3533)	(0.3835)	(0.3786)	(0.6114)
D4		0.069246	0.163741	-0.022341	-0.014110	-0.006641		0.186185	0.239740	0.339958	0.293721	0.260649
Thursday		(0.7629)	(0.4692)	(0.9183)	(0.9481)	(0.9757)		(0.5845)	(0.4498)	(0.2492)	(0.3316)	(0.3729)
D5		0.237466	0.224168	0.210431	0.215983	0.221439		0.157336	0.151430	0.158357	0.120854	0.091476
Friday		(0.1810)	(0.1961)	(0.2285)	(0.2145)	(0.2050)		(0.6155)	(0.6448)	(0.6117)	(0.7118)	(0.7833)
D6		**1.015876**	**1.149349**	**1.224506**	**1.246694**	**1.235560**		0.290327	0.475692	0.468371	0.383192	0.416989
Saturday		**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**		(0.3434)	(0.1282)	(0.1482)	(0.2532)	(0.2151)
D7		-0.243463	-0.173789	-0.241000	-0.231466	-0.230083		**0.730106**	**1.045424**	**1.070584**	**0.996744**	**1.055607**
Sunday		(0.2339)	(0.3820)	(0.2033)	(0.2215)	(0.2270)		**(0.0291)**	**(0.0019)**	**(0.0007)**	**(0.0020)**	**(0.0011)**
DD1905			0.232577	0.226990	0.192953	0.163895			-3.024434	-3.077601	-2.801553	-3.204847
National H.			(0.7080)	(0.7280)	(0.7380)	(0.7945)			(0.9027)	(0.9163)	(0.8522)	(0.6391)
DD2304			0.387148	0.369528	0.366510	0.378967			0.017407	0.155588	0.077647	-0.126119
National H.			(0.5496)	(0.5333)	(0.5359)	(0.5152)			(0.9978)	(0.9889)	(0.9915)	(0.9696)
DD2910			0.436097	0.264788	0.262957	0.263507			-17.79134	-8.161530	6.463022	-18.66712
National H.			(0.4158)	(0.5312)	(0.5308)	(0.5321)			(0.9762)	(0.5906)	(0.7809)	(0.9790)
DD3008			0.344769	0.372130	0.346698	0.323692			0.776707	0.389859	0.194685	0.418404
National H.			(0.5498)	(0.4630)	(0.4912)	(0.5143)			(0.9128)	(0.9533)	(0.9446)	(0.8792)
DDNYR				**1.011453**	**1.068398**	**1.043328**				0.496142	-3.089711	-10.54765
New Year				**(0.0007)**	**(0.0002)**	**(0.0004)**				(0.9915)	(0.9022)	(0.2792)
DDRAM				**0.075102**	**0.075251**	**0.076094**				0.156870	0.143237	0.128369
Ramadan				**(0.0007)**	**(0.0006)**	**(0.0003)**				(0.6123)	(0.6602)	(0.7132)
DDRFEST				**0.251628**	**0.239175**	**0.227119**				-0.561332	-0.467395	-0.726081
Religious H.				**(0.0443)**	**(0.0539)**	**(0.0611)**				(0.6788)	(0.7365)	(0.5863)
CHRONO					-0.214608						0.154291	
Key Events					(0.2147)						(0.8166)	
CHRONO2						**-0.059638**						-0.299749
Key Events						**(0.0634)**						(0.4275)

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 4. Panel III: EGARCH Estimates (Variance Equation, Continued)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	AA101	**AA102**	**AA103**	**AA104**	**AA105**	**AA106**	**AA201**	**AA202**	**AA203**	**AA204**	**AA205**	**AA206**
Constant	**-0.287001**	**-0.537709**	**-0.572355**	**-0.464710**	**-0.465810**	**-0.448037**	**-2.154989**	**-2.061582**	**-3.040933**	**-3.101486**	**-3.220311**	**-3.408810**
	(0.0000)	**(0.0003)**	**(0.0001)**	**(0.0008)**	**(0.0007)**	**(0.0011)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
$\left\lvert \varepsilon(-1)/\sqrt{h(-1)} \right\rvert$	**0.266380**	**0.334571**	**0.331256**	**0.296459**	**0.295651**	**0.290190**	**0.752962**	**0.605776**	**0.662094**	**0.752146**	**0.731472**	**0.703107**
	(0.0000)	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
$\varepsilon(-1)/\sqrt{h(-1)}$	-0.034964	-0.024761	-0.042069	-0.035611	-0.035357	-0.032986	-0.017165	-0.046217	-0.094671	-0.091782	-0.107194	-0.122918
	(0.1150)	(0.3753)	(0.0982)	(0.1238)	(0.1232)	(0.1462)	(0.8592)	(0.6161)	(0.3392)	(0.3541)	(0.2781)	(0.2160)
$\ln h(-1)$	**0.943367**	**0.891038**	**0.896474**	**0.912459**	**0.914221**	**0.919125**	**0.314392**	**0.430170**	0.180563	0.206003	0.145373	0.063525
	(0.0000)	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0038)**	**(0.0003)**	(0.2610)	(0.1744)	(0.3230)	(0.6570)
GED	**0.929623**	**0.953304**	**0.995797**	**1.063675**	**1.069313**	**1.071105**	**0.935901**	**0.986019**	**1.084091**	**1.117353**	**1.112117**	**1.110156**
	(0.0000)	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0000)**
R2	0.668234	0.702124	0.705142	0.711908	0.711503	0.711629	0.647732	0.694867	0.712367	0.709482	0.711518	0.712408
LIKELIHOOD	-1240.692	-1042.449	-978.6656	-898.9127	-898.2009	-896.9017	-91.48022	-26.03343	4.738218	4.017933	-2.631392	12.93806
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 5. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	BB101	**BB102**	**BB103**	**BB104**	**BB105**	**BB106**	**BB201**	**BB202**	**BB203**	**BB204**	**BB205**	**BB206**
Constant	0.025181	0.138758	0.125779	0.157361	0.158851	0.157807	0.023854	0.162489	0.182277	0.180847	0.239358	0.236897
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0012	0.0000	0.0000	0.0000	0.0000	0.0000
D1		**0.347793**	**0.363121**	**0.307278**	**0.307580**	**0.308138**		**-0.420089**	**-0.452267**	**-0.442924**	**-0.552276**	**-0.554234**
Monday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D2		-0.049308	-0.031103	-0.062184	-0.066179	-0.064480		0.065005	0.090353	0.094169	**0.097026**	0.075783
Tuesday		0.2596	0.4777	0.1581	0.1331	0.1451		0.2086	0.1267	0.1052	**0.0834**	0.1738
D4		**-0.093630**	-0.067061	**-0.079189**	**-0.079164**	**-0.079436**		-0.001031	-0.035902	-0.047245	-0.084667	-0.080871
Thursday		**0.0231**	0.1033	**0.0575**	**0.0576**	**0.0573**		0.9824	0.4488	0.3308	0.1012	0.1087
D5		0.061136	**0.110170**	0.078036	0.073243	0.074929		-0.062989	-0.084766	-0.092449	**-0.159807**	**-0.129065**
Friday		0.2101	**0.0225**	0.1159	0.1404	0.1322		0.2910	0.1793	0.1215	**0.0113**	**0.0326**
D6		**-0.557603**	**-0.560553**	**-0.600067**	**-0.601688**	**-0.599406**		-0.065834	-0.060578	-0.084807	**-0.126998**	**-0.117466**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		0.2873	0.3570	0.1876	**0.0550**	**0.0609**
D7		**-0.431729**	**-0.429741**	**-0.459916**	**-0.464215**	**-0.458566**		**-0.514873**	**-0.576739**	**-0.572663**	**-0.710016**	**-0.703289**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.849734**	**-0.856697**	**-0.857436**	**-0.857764**			**-0.793911**	-0.794720	**-0.820891**	**-0.775126**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	0.1452	**0.0000**	**0.0000**
DD2304			**-1.074017**	**-1.085792**	**-1.086015**	**-1.087299**			0.050596	0.045003	0.051666	0.027379
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.9839	0.9819	0.9702	0.9475
DD2910			**-0.917883**	**-0.899393**	**-0.900807**	**-0.904013**			0.061803	0.037750	0.023389	-0.019823
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.8384	0.9606	0.9985	0.7424
DD3008			**-0.953240**	**-0.928866**	**-0.929105**	**-0.930008**			**-0.952811**	-0.996487	**-1.205045**	**-1.208424**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0001**	0.8260	**0.0000**	**0.0000**
DDNYR				**-1.063929**	**-1.069031**	**-1.069922**				0.005542	0.053620	0.037834
New Year				**0.0006**	**0.0001**	**0.0004**				0.9983	0.4152	0.6430
DDRAM				-0.024371	-0.021962	-0.024893				0.023951	0.006253	-0.002156
Ramadan				0.1690	0.2126	0.1571				0.4195	0.8507	0.9458
DDRFEST				**-0.834353**	**-0.832494**	**-0.831722**				0.106802	**0.116234**	**0.141315**
Religious H.				**0.0000**	**0.0000**	**0.0000**				0.1123	**0.0342**	**0.0348**
CHRONO					0.019149						-0.008831	
Key Events					0.5834						0.8970	
CHRONO2						0.003720						-0.002794
Key Events						0.7872						0.9235

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 5. Panel II: EGARCH Estimates (Variance Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	BB101	**BB102**	**BB103**	**BB104**	**BB105**	**BB106**	**BB201**	**BB202**	**BB203**	**BB204**	**BB205**	**BB206**
D1		-0.164617	-0.221997	**-0.516514**	**-0.536625**	**-0.516122**		0.172601	0.251437	0.491791	**0.903940**	**0.768184**
Monday		0.3902	0.2366	**0.0038**	**0.0030**	**0.0040**		0.6338	0.4738	0.1849	**0.0140**	**0.0429**
D2		**-0.446482**	-0.326581	**-0.400702**	**-0.415659**	**-0.410809**		**-0.936133**	**-0.917241**	**-0.600255**	-0.094857	-0.296974
Tuesday		**0.0586**	0.1565	**0.0712**	**0.0617**	**0.0667**		**0.0136**	**0.0115**	**0.0824**	0.7644	0.3787
D4		-0.006439	0.152338	-0.083559	-0.092011	-0.073693		-0.083693	-0.090522	0.094300	0.200960	0.193200
Thursday		0.9773	0.4983	0.6992	0.6717	0.7351		0.8158	0.8076	0.7721	0.4410	0.5029
D5		0.154128	0.180050	0.158463	0.132671	0.157252		-0.045259	-0.029339	0.029728	0.097467	0.060473
Friday		0.3779	0.2940	0.3802	0.4622	0.3834		0.8859	0.9240	0.9224	0.7629	0.8540
D6		**0.913087**	**1.144316**	**1.156394**	**1.157323**	**1.162741**		0.184243	0.098222	0.242664	0.348025	0.251382
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		0.5584	0.7483	0.4528	0.2992	0.4544
D7		-0.286854	-0.214229	-0.280324	-0.294283	-0.281005		0.416287	**0.631693**	**0.796841**	**1.019752**	**0.900154**
Sunday		0.1486	0.2716	0.1340	0.1172	0.1344		0.2146	**0.0518**	**0.0130**	**0.0012**	**0.0046**
DD1905			0.068737	0.129911	0.102732	0.065875			-2.188265	-1.834667	-1.657252	-1.913386
National H.			0.9059	0.8304	0.8521	0.9027			0.7767	0.9808	0.8215	0.5401
DD2304			0.211171	0.244355	0.215321	0.253572			0.196361	0.124399	-0.092099	-0.906539
National H.			0.6984	0.6472	0.6775	0.6230			0.9835	0.9861	0.9889	0.6698
DD2910			0.235540	0.160543	0.165928	0.177464			-8.585463	-7.497677	2.031120	-18.20553
National H.			0.6056	0.6867	0.6700	0.6497			0.8335	0.9350	0.8724	0.7865
DD3008			0.419854	0.528501	0.485924	0.462892			1.345205	0.663628	0.744006	-0.008314
National H.			0.4617	0.3412	0.3611	0.3775			0.5625	0.9914	0.6022	0.9944
DDNYR				**1.065601**	**1.067760**	**1.065504**				0.055320	-20.77303	-20.46776
New Year				**0.0005**	**0.0002**	**0.0004**				0.9977	0.9561	0.9761
DDRAM				**0.069258**	**0.067951**	**0.069872**				0.170710	0.285085	0.168804
Ramadan				**0.0006**	**0.0004**	**0.0002**				0.5072	0.4251	0.6073
DDRFEST				**0.277340**	**0.252275**	**0.245866**				-0.502703	-1.037801	-0.460779
Religious H.				**0.0230**	**0.0313**	**0.0340**				0.6989	0.4907	0.7890
CHRONO					-0.208820						0.023276	
Key Events					0.1984						0.9702	
CHRONO2						-0.058837						-0.077573
Key Events						0.0530						0.8550

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 5. Panel III: EGARCH Estimates (Variance Equation, Continued)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	BB101	BB102	BB103	BB104	BB105	BB106	BB201	BB202	BB203	BB204	BB205	BB206
Constant	-0.273378	-0.430028	-0.474231	-0.384141	-0.348315	-0.350467	-2.060854	-1.796315	-1.817231	-2.573280	-3.723247	-3.382463
	0.0000	0.0026	0.0006	0.0041	0.0089	0.0083	0.0000	0.0001	0.0001	0.0000	0.0000	0.0000
$\lvert \varepsilon(-1)/\sqrt{h(-1)} \rvert$	0.261899	0.334997	0.308849	0.296737	0.285100	0.282116	0.753010	0.703538	0.710031	0.787408	0.639000	0.691783
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
$\varepsilon(-1)/\sqrt{h(-1)}$	-0.051284	-0.021988	-0.039752	-0.030301	-0.034719	-0.035405	-0.020592	-0.028058	-0.041937	-0.071760	-0.092837	-0.083507
	0.0121	0.3569	0.0558	0.1548	0.0915	0.0842	0.8231	0.7634	0.6084	0.4387	0.3323	0.3955
$\ln h(-1)$	0.949425	0.909324	0.923890	0.926579	0.932342	0.934810	0.347412	0.473846	0.514015	0.314431	-0.087434	0.019277
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0030	0.0000	0.0000	0.0182	0.5210	0.8899
GED	0.946561	0.979601	1.020221	1.074326	1.079022	1.083273	0.943058	1.004118	1.189632	1.176487	1.241010	1.214900
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R2	0.703021	0.729918	0.731795	0.736111	0.736051	0.736093	0.743834	0.774118	0.786024	0.787432	0.796460	0.794701
LIKELIHOOD	-1280.853	-1103.733	-1038.327	-962.4250	-961.2054	-960.1945	-101.1395	-47.94131	-23.18852	-21.91117	-32.07944	-18.47457
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 6. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	AAA101	**AAA102**	**AAA103**	**AAA104**	**AAA105**	**AAA106**	**AAA201**	**AAA202**	**AAA203**	**AAA204**	**AAA205**	**AAA206**
Constant	0.045968	0.188116	0.190498	0.197053	0.184066	0.182582	0.028218	0.231295	0.214508	0.217855	0.214220	0.214159
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
D1		**0.243945**	**0.243524**	**0.223591**	**0.245952**	**0.246034**		**-0.567472**	**-0.539676**	**-0.537267**	**-0.540160**	**-0.540111**
Monday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D2		**-0.111291**	**-0.112269**	**-0.127881**	**-0.111315**	**-0.118309**		-0.026785	-0.009831	-0.015162	-0.009939	-0.010020
Tuesday		**0.0079**	**0.0081**	**0.0026**	**0.0098**	**0.0047**		0.6054	0.8586	0.7881	0.8611	0.8607
D4		**-0.089612**	**-0.085853**	**-0.084127**	**-0.070305**	-0.067305		0.017553	0.015983	0.016594	0.008260	0.009652
Thursday		**0.0286**	**0.0372**	**0.0450**	**0.0978**	0.1021		0.7053	0.7444	0.7406	0.8712	0.8487
D5		0.059321	0.060171	0.062914	0.080002	0.078794		**-0.104470**	-0.065142	-0.073212	-0.067575	-0.055704
Friday		0.2197	0.2178	0.2020	0.1102	0.1027		**0.0715**	0.2832	0.2369	0.2821	0.3734
D6		**-0.582734**	**-0.590182**	**-0.591551**	**-0.578644**	**-0.580746**		**-0.113834**	-0.091779	**-0.117897**	-0.099456	**-0.104365**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0466**	0.1198	**0.0503**	0.1064	**0.0902**
D7		**-0.499866**	**-0.503783**	**-0.490506**	**-0.480122**	**-0.467687**		**-0.660439**	**-0.618223**	**-0.642463**	**-0.643904**	**-0.649637**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.816526**	**-0.813515**	**-0.816020**	**-0.813938**			**-0.828364**	**-0.795431**	**-0.794973**	**-0.823213**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.703991**	**-0.696958**	**-0.690676**	**-0.709985**			0.071399	0.086687	0.093492	0.021109
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.6523	0.6289	0.6219	0.8918
DD2910			**-0.844723**	**-0.850951**	**-0.851403**	**-0.849342**			-0.041890	-0.035376	-0.022813	-0.025191
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.8705	0.9078	0.9425	0.9414
DD3008			**-1.039239**	**-1.036983**	**-1.038840**	**-1.038939**			**-1.103754**	**-1.111974**	**-1.121534**	**-1.121968**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.800587**	**-0.776646**	**-0.884344**				0.045340	0.046044	0.050200
New Year				**0.0000**	**0.0000**	**0.0000**				0.8325	0.8600	0.8369
DDRAM				0.005018	0.008411	0.007160				**0.055303**	**0.054547**	**0.055842**
Ramadan				0.7465	0.5897	0.6389				**0.0260**	**0.0303**	**0.0277**
DDRFEST				**-0.811249**	**-0.803210**	**-0.806668**				0.094745	0.104306	0.101479
Religious H.				**0.0000**	**0.0000**	**0.0000**				0.1768	0.1415	0.1510
CHRONO					0.002260						-0.035409	
Key Events					0.9452						0.5424	
CHRONO2						0.011726						-0.001141
Key Events						0.3923						0.9669

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 6. Panel II: EGARCH Estimates (Variance Equation, Restricted Model)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	AAA101	AAA102	AAA103	AAA104	AAA105	AAA106	AAA201	AAA202	AAA203	AAA204	AAA205	AAA206
Constant	**-0.287001**	**-0.379936**	**-0.373376**	**-0.281447**	**-0.287888**	**-0.288293**	**-2.154989**	**-2.028643**	**-2.475267**	**-2.470940**	**-2.503822**	**-2.590823**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\lvert \varepsilon(-1)/\sqrt{h(-1)} \rvert$	**0.266380**	**0.299278**	**0.298229**	**0.248938**	**0.251620**	**0.254948**	**0.752962**	**0.587015**	**0.711567**	**0.704310**	**0.704653**	**0.712363**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	-0.034964	-0.028650	-0.034197	-0.031262	-0.030144	-0.030096	-0.017165	-0.064779	-0.097721	-0.121952	-0.119650	-0.122810
	0.1150	0.2772	0.1447	0.1010	0.1139	0.1284	0.8592	0.4497	0.2772	0.1554	0.1580	0.1510
$\ln h(-1)$	**0.943367**	**0.906415**	**0.913240**	**0.945011**	**0.943184**	**0.942947**	**0.314392**	**0.362661**	0.255663	0.261478	0.255067	0.223254
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0038**	**0.0020**	0.1440	0.1509	0.1645	0.2181
GED	**0.929623**	**0.897724**	**0.925038**	**0.938130**	**0.947208**	**0.926847**	**0.935901**	**0.928582**	**1.014103**	**1.038122**	**1.058707**	**1.061696**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.668234	0.697994	0.701236	0.709594	0.709372	0.709220	0.647732	0.693855	0.708952	0.710161	0.712415	0.712124
LIKELIHOOD	-1240.692	-1095.445	-1049.594	-1000.258	-1000.703	-999.2743	-91.48022	-39.75683	-20.01110	-17.37825	-17.29031	-17.77940
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 7. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	BBB101	**BBB102**	**BBB103**	**BBB104**	**BBB105**	**BBB106**	**BBB201**	**BBB202**	**BBB203**	**BBB204**	**BBB205**	**BBB206**
Constant	0.025181	0.178880	0.159746	0.193842	0.200081	0.196623	0.023854	0.162952	0.170865	0.145378	0.150441	0.139828
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0012	0.0000	0.0001	0.0005	0.0003	0.0007
D1		**0.249807**	**0.269849**	**0.210705**	**0.200486**	**0.206388**		**-0.394978**	**-0.438925**	**-0.371684**	**-0.369744**	**-0.361921**
Monday		**0.0000**	**0.0000**	**0.0001**	**0.0002**	**0.0001**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D2		**-0.133742**	**-0.104271**	**-0.139249**	**-0.148071**	**-0.147035**		0.052580	0.034899	0.053475	0.057888	0.072101
Tuesday		**0.0032**	**0.0221**	**0.0025**	**0.0014**	**0.0015**		0.3199	0.5503	0.3655	0.3192	0.2138
D4		**-0.124930**	**-0.103945**	**-0.106924**	**-0.120327**	**-0.112083**		0.008509	0.006294	0.015265	-0.007807	0.000459
Thursday		**0.0051**	**0.0205**	**0.0181**	**0.0082**	**0.0134**		0.8600	0.9102	0.7686	0.8790	0.9928
D5		0.012564	0.051598	0.036858	0.023990	0.029832		-0.057837	-0.052586	-0.031199	-0.040293	-0.034361
Friday		0.8090	0.3220	0.4836	0.6494	0.5702		0.3359	0.4598	0.6181	0.5149	0.5751
D6		**-0.574405**	**-0.551186**	**-0.593211**	**-0.598808**	**-0.595459**		-0.079742	-0.070653	-0.059802	-0.061464	-0.052590
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		0.1814	0.2966	0.3412	0.3286	0.3989
D7		**-0.445824**	**-0.434736**	**-0.473285**	**-0.476996**	**-0.466511**		**-0.519213**	**-0.547788**	**-0.500067**	**-0.501139**	**-0.487851**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.829605**	**-0.851854**	**-0.840956**	**-0.844925**			**-0.856309**	**-0.815946**	**-0.825568**	**-0.828590**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.798941**	**-0.811341**	**-0.799135**	**-0.805142**			0.021980	0.029610	0.029868	0.016037
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.8876	0.8688	0.8684	0.9215
DD2910			**-0.828644**	**-0.818330**	**-0.815716**	**-0.810543**			-0.028016	-0.000271	0.014255	0.030780
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			0.9385	1.0000	0.9949	0.9281
DD3008			**-0.949777**	**-0.940068**	**-0.937606**	**-0.935459**			**-0.935905**	**-0.971512**	**-0.986245**	**-1.002031**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.855506**	**-0.863388**	**-0.850807**				0.027818	0.031950	0.034620
New Year				**0.0000**	**0.0000**	**0.0000**				0.9105	0.8914	0.8898
DDRAM				-0.025247	-0.024716	-0.026905				0.036584	0.035124	0.037664
Ramadan				0.1036	0.1134	0.0842				0.1554	0.1698	0.1391
DDRFEST				**-0.760437**	**-0.756446**	**-0.765178**				0.064483	0.062313	0.058030
Religious H.				**0.0000**	**0.0000**	**0.0000**				0.3902	0.4021	0.4360
CHRONO					0.011263						-0.025976	
Key Events					0.7441						0.6490	
CHRONO2						0.003328						-0.006624
Key Events						0.8212						0.8034

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 7. Panel II: EGARCH Estimates (Variance Equation, Restricted Model)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Subsample 1: June 12 1998 – October 31 2005						Subsample 2: January 1 2006 – October 31 2007					
	BBB101	**BBB102**	**BBB103**	**BBB104**	**BBB105**	**BBB106**	**BBB201**	**BBB202**	**BBB203**	**BBB204**	**BBB205**	**BBB206**
Constant	**-0.273378**	**-0.334474**	**-0.323210**	**-0.287348**	**-0.287976**	**-0.290501**	**-2.060854**	**-1.918298**	**-0.493990**	**-2.236567**	**-2.227231**	**-2.281667**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0006**	**0.0000**	**0.0000**	**0.0000**
$\lvert\varepsilon(-1)/\sqrt{h(-1)}\rvert$	**0.261899**	**0.290769**	**0.283673**	**0.265415**	**0.265190**	**0.267388**	**0.753010**	**0.680013**	**0.313950**	**0.763040**	**0.766811**	**0.788309**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	**-0.051284**	**-0.036400**	**-0.045354**	**-0.041403**	**-0.041995**	**-0.039269**	-0.020592	-0.034362	-0.067210	-0.079611	-0.070666	-0.088535
	0.0121	**0.0965**	**0.0234**	**0.0201**	**0.0182**	**0.0269**	0.8231	0.7168	0.1491	0.3811	0.4443	0.3446
$\ln h(-1)$	**0.949425**	**0.928546**	**0.934586**	**0.947526**	**0.947351**	**0.946823**	**0.347412**	**0.417135**	**0.893749**	**0.350276**	**0.353593**	**0.335636**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0030**	**0.0004**	**0.0000**	**0.0168**	**0.0157**	**0.0235**
GED	**0.946561**	**0.935201**	**0.958861**	**0.970711**	**0.974723**	**0.974596**	**0.943058**	**0.939340**	**0.993961**	**1.049533**	**1.042433**	**1.035096**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.703021	0.727998	0.731459	0.738111	0.737989	0.737345	0.743834	0.775442	0.785858	0.784507	0.784296	0.784813
LIKELIHOOD	-1280.853	-1157.056	-1109.623	-1068.898	-1068.963	-1068.974	-101.1395	-59.77819	-47.59313	-39.78900	-39.69318	-39.74213
OBS	2663	2663	2663	2663	2663	2663	654	654	654	654	654	654

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses.

Table 8. OLS Estimates – Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	C101	**C102**	**C103**	**C104**	**C105**	**C106**
Constant	-5.56E-05	0.177789	0.186004	0.200408	0.200517	0.196216
	0.9947	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.070134	-0.074127	-0.081815	-0.081790	-0.081219
Monday		0.1648	0.1388	0.1056	0.1057	0.1083
D2		**-0.092928**	**-0.099276**	**-0.102081**	**-0.101941**	**-0.101972**
Tuesday		**0.0209**	**0.0120**	**0.0099**	**0.0100**	**0.0100**
D4		**-0.136957**	**-0.137254**	**-0.139244**	**-0.139307**	**-0.139036**
Thursday		**0.0003**	**0.0002**	**0.0001**	**0.0001**	**0.0001**
D5		**-0.165763**	**-0.163544**	**-0.172407**	**-0.172360**	**-0.172546**
Friday		**0.0004**	**0.0003**	**0.0002**	**0.0002**	**0.0002**
D6		**-0.394999**	**-0.394364**	**-0.407115**	**-0.407085**	**-0.407114**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.384225**	**-0.382473**	**-0.392324**	**-0.392277**	**-0.391750**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.609270**	**-0.615786**	**-0.615954**	**-0.614929**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.566411**	**-0.571668**	**-0.571817**	**-0.571184**
National H.			**0.0031**	**0.0029**	**0.0029**	**0.0029**
DD2910			**-0.705844**	**-0.720533**	**-0.720705**	**-0.719198**
National H.			**0.0002**	**0.0002**	**0.0002**	**0.0002**
DD3008			**-0.752432**	**-0.751701**	**-0.751824**	**-0.751158**
National H.			**0.0026**	**0.0032**	**0.0032**	**0.0033**
DDNYR				**-0.737906**	**-0.735484**	**-0.745319**
New Year				**0.0952**	**0.0990**	**0.0922**
DDRAM				0.017394	0.017388	0.016944
Ramadan				0.5866	0.5867	0.5961
DDRFEST				**-0.402053**	**-0.402218**	**-0.398611**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.007679	
Key Events					0.8880	
CHRONO2						0.034032
Key Events						0.1409
OBS	3332	3332	3332	3332	3332	3332
R2	0.691869	0.699531	0.706022	0.712086	0.712088	0.712247

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 9. OLS Estimates – Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	D101	**D102**	**D103**	**D104**	**D105**	**D106**
Constant	0.009270	0.171910	0.179982	0.196632	0.196927	0.193632
	0.2902	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.060771	-0.064631	-0.072321	-0.072277	-0.071862
Monday		0.2295	0.1973	0.1537	0.1540	0.1567
D2		**-0.078324**	**-0.084310**	**-0.088195**	**-0.087848**	**-0.088173**
Tuesday		**0.0524**	**0.0333**	**0.0262**	**0.0268**	**0.0264**
D4		**-0.131466**	**-0.131283**	**-0.134088**	**-0.134189**	**-0.133903**
Thursday		**0.0005**	**0.0003**	**0.0002**	**0.0002**	**0.0002**
D5		**-0.154734**	**-0.151870**	**-0.160792**	**-0.160644**	**-0.160684**
Friday		**0.0009**	**0.0007**	**0.0004**	**0.0004**	**0.0004**
D6		**-0.363904**	**-0.362187**	**-0.375252**	**-0.375117**	**-0.375078**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.350544**	**-0.348080**	**-0.358469**	**-0.358317**	**-0.357916**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.668720**	**-0.679752**	**-0.680194**	**-0.679561**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.632715**	**-0.641526**	**-0.641903**	**-0.641591**
National H.			**0.0007**	**0.0006**	**0.0006**	**0.0006**
DD2910			**-0.735557**	**-0.743292**	**-0.743770**	**-0.742293**
National H.			**0.0002**	**0.0002**	**0.0002**	**0.0002**
DD3008			**-0.718577**	**-0.717353**	**-0.717769**	**-0.716685**
National H.			**0.0057**	**0.0069**	**0.0069**	**0.0071**
DDNYR				**-0.764379**	**-0.757561**	**-0.769866**
New Year				**0.0938**	**0.0990**	**0.0919**
DDRAM				-0.009590	-0.009588	-0.010055
Ramadan				0.7669	0.7668	0.7559
DDRFEST				**-0.362648**	**-0.363111**	**-0.360065**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.021659	
Key Events					0.6991	
CHRONO2						0.023766
Key Events						0.3112
OBS	3325	3325	3325	3325	3325	3325
R2	0.730884	0.736299	0.742338	0.747011	0.747021	0.747079

Explanations: (1) The optimal lag order is 35 for the Subsample 1 and 14 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 10. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	CC101	**CC102**	**CC103**	**CC104**	**CC105**	**CC106**
Constant	0.036499	0.121482	0.117304	0.115312	0.116284	0.114067
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.010680	-0.013867	-0.021457	-0.021349	-0.020411
Monday		0.6749	0.5823	0.4125	0.4138	0.4343
D2		-0.024599	-0.024916	-0.027587	-0.027305	-0.028577
Tuesday		0.1920	0.1818	0.1564	0.1602	0.1408
D4		**-0.058144**	**-0.047760**	**-0.044671**	**-0.044118**	**-0.043650**
Thursday		**0.0016**	**0.0092**	**0.0162**	**0.0174**	**0.0189**
D5		**-0.059771**	**-0.046175**	**-0.041215**	**-0.040746**	**-0.039307**
Friday		**0.0113**	**0.0477**	**0.0896**	**0.0931**	**0.1043**
D6		**-0.216408**	**-0.205770**	**-0.196791**	**-0.198807**	**-0.194788**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.244031**	**-0.238153**	**-0.231704**	**-0.233776**	**-0.228946**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.792104**	**-0.788227**	**-0.788902**	**-0.786681**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.795595**	**-0.794863**	**-0.813797**	**-0.815298**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2910			**-0.838300**	**-0.836125**	**-0.839439**	**-0.845993**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD3008			**-1.000400**	**-1.011071**	**-1.008447**	**-1.009093**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.829940**	**-0.825774**	**-0.841812**
New Year				**0.0006**	**0.0005**	**0.0006**
DDRAM				-0.006400	-0.005838	-0.006375
Ramadan				0.6911	0.7154	0.6883
DDRFEST				**-0.795412**	**-0.795258**	**-0.793619**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.006510	
Key Events					0.8265	
CHRONO2						0.008152
Key Events						0.5106

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 10. Panel II: EGARCH Estimates (Variance Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	CC101	**CC102**	**CC103**	**CC104**	**CC105**	**CC106**
D1		-0.037873	-0.101540	**-0.290098**	**-0.302237**	**-0.299405**
Monday		0.8299	0.5547	**0.0737**	**0.0647**	**0.0686**
D2		**-0.471732**	**-0.401146**	**-0.454001**	**-0.460256**	**-0.464435**
Tuesday		**0.0304**	**0.0587**	**0.0274**	**0.0262**	**0.0265**
D4		0.168712	0.269359	0.055055	0.040298	0.051364
Thursday		0.4164	0.1811	0.7757	0.8358	0.7943
D5		0.243952	**0.258820**	**0.289685**	**0.286410**	**0.279261**
Friday		0.1251	**0.0942**	**0.0653**	**0.0696**	**0.0787**
D6		**0.797059**	**0.988913**	**1.020549**	**1.011321**	**1.004845**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		-0.083110	-0.005744	-0.040198	-0.050952	-0.053807
Sunday		0.6432	0.9739	0.8096	0.7611	0.7504
DD1905			-0.175006	-0.074735	-0.086444	-0.112350
National H.			0.6583	0.8579	0.8369	0.7694
DD2304			0.139128	0.257829	0.282118	0.323664
National H.			0.7670	0.5691	0.5368	0.4804
DD2910			0.298498	0.084765	0.090207	0.091914
National H.			0.4592	0.8028	0.7903	0.7903
DD3008			0.269311	0.446537	0.427017	0.415011
National H.			0.5001	0.2431	0.2652	0.2808
DDNYR				**1.296163**	**1.326379**	**1.353558**
New Year				**0.0000**	**0.0000**	**0.0000**
DDRAM				**0.066069**	**0.065183**	**0.066197**
Ramadan				**0.0000**	**0.0000**	**0.0000**
DDRFEST				**0.266259**	**0.260937**	**0.255934**
Religious H.				**0.0046**	**0.0056**	**0.0068**
CHRONO					-0.152108	
Key Events					0.2903	
CHRONO2						**-0.048556**
Key Events						**0.0746**

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 10. Panel III: EGARCH Estimates (Variance Equation, Continued)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	CC101	**CC102**	**CC103**	**CC104**	**CC105**	**CC106**
Constant	**-0.283608**	**-0.397427**	**-0.454256**	**-0.401943**	**-0.390635**	**-0.385906**
	0.0000	**0.0021**	**0.0003**	**0.0009**	**0.0013**	**0.0016**
$\lvert \varepsilon(-1)/\sqrt{h(-1)} \rvert$	**0.263683**	**0.270693**	**0.271699**	**0.253343**	**0.253585**	**0.253981**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	**-0.031838**	-0.031567	**-0.039849**	**-0.036941**	**-0.036875**	**-0.036440**
	0.0902	0.1011	**0.0228**	**0.0379**	**0.0392**	**0.0442**
$\ln h(-1)$	**0.947695**	**0.939529**	**0.943195**	**0.942540**	**0.942652**	**0.943051**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
GED	**0.939088**	**0.968865**	**1.010289**	**1.084371**	**1.080378**	**1.074278**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.661259	0.674047	0.677101	0.679800	0.679801	0.680373
LIKELIHOOD	-1357.835	-1259.877	-1180.112	-1120.082	-1119.065	-1117.386
OBS	3332	3332	3332	3332	3332	3332

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 11. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	DD101	**DD102**	**DD103**	**DD104**	**DD105**	**DD106**
Constant	0.024950	0.097430	0.094997	0.093359	0.094286	0.091144
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.010027	-0.012596	-0.014591	-0.014455	-0.014208
Monday		0.6978	0.6229	0.5803	0.5842	0.5900
D2		-0.029959	-0.029271	-0.024581	-0.024300	-0.024588
Tuesday		0.1162	0.1216	0.2089	0.2143	0.2085
D4		**-0.037909**	**-0.035299**	-0.030443	-0.030451	-0.028728
Thursday		**0.0409**	**0.0580**	0.1078	0.1077	0.1285
D5		-0.038784	-0.029638	-0.018072	-0.019497	-0.015735
Friday		0.1047	0.2113	0.4610	0.4266	0.5205
D6		**-0.177824**	**-0.167425**	**-0.156808**	**-0.158814**	**-0.153452**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.229442**	**-0.221183**	**-0.216783**	**-0.218276**	**-0.213780**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.804250**	**-0.809161**	**-0.809931**	**-0.808908**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.785284**	**-0.812322**	**-0.814498**	**-0.814305**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2910			**-0.826701**	**-0.831347**	**-0.830043**	**-0.832308**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD3008			**-0.946556**	**-0.952207**	**-0.953280**	**-0.952981**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.817578**	**-0.805234**	**-0.819335**
New Year				**0.0027**	**0.0044**	**0.0035**
DDRAM				-0.000687	-0.001051	-0.002031
Ramadan				0.9663	0.9486	0.8999
DDRFEST				**-0.747383**	**-0.747169**	**-0.751921**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.010544	
Key Events					0.7261	
CHRONO2						0.003610
Key Events						0.7735

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 11. Panel II: EGARCH Estimates (Variance Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	DD101	**DD102**	**DD103**	**DD104**	**DD105**	**DD106**
D1		-0.063355	-0.156044	**-0.309715**	**-0.305556**	**-0.321163**
Monday		0.7163	0.3633	**0.0559**	**0.0606**	**0.0487**
D2		**-0.507051**	**-0.453167**	**-0.514307**	**-0.498053**	**-0.521521**
Tuesday		**0.0177**	**0.0301**	**0.0107**	**0.0137**	**0.0103**
D4		0.126938	0.191399	0.018123	0.024967	0.014756
Thursday		0.5375	0.3519	0.9265	0.8988	0.9406
D5		0.223159	0.219184	0.237425	0.248446	0.247190
Friday		0.1482	0.1445	0.1366	0.1192	0.1222
D6		**0.780763**	**0.950135**	**0.988662**	**1.002163**	**0.977480**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		-0.112360	-0.060908	-0.086519	-0.079493	-0.090696
Sunday		0.5250	0.7255	0.6016	0.6317	0.5863
DD1905			-0.250012	-0.145433	-0.142699	-0.159731
National H.			0.5345	0.7252	0.7307	0.6946
DD2304			0.061258	0.228944	0.240633	0.274219
National H.			0.8895	0.6137	0.5891	0.5391
DD2910			0.326740	0.109060	0.109463	0.114916
National H.			0.4046	0.7587	0.7559	0.7438
DD3008			0.516990	0.722389	0.702640	0.679015
National H.			0.2199	0.1039	0.1118	0.1182
DDNYR				**1.354868**	**1.376632**	**1.366244**
New Year				**0.0000**	**0.0000**	**0.0000**
DDRAM				**0.067544**	**0.067605**	**0.067913**
Ramadan				**0.0000**	**0.0000**	**0.0000**
DDRFEST				**0.317218**	**0.307067**	**0.297465**
Religious H.				**0.0023**	**0.0028**	**0.0032**
CHRONO					-0.139376	
Key Events					0.3580	
CHRONO2						**-0.051062**
Key Events						**0.0694**

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 11. Panel III: EGARCH Estimates (Variance Equation, Continued)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	DD101	**DD102**	**DD103**	**DD104**	**DD105**	**DD106**
Constant	**-0.281109**	**-0.377501**	**-0.406064**	**-0.392214**	**-0.394503**	**-0.368588**
	0.0000	**0.0029**	**0.0010**	**0.0010**	**0.0010**	**0.0021**
$\lvert \varepsilon(-1)/\sqrt{h(-1)} \rvert$	**0.258583**	**0.276187**	**0.272774**	**0.273249**	**0.271403**	**0.267473**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	**-0.049835**	**-0.044404**	**-0.053220**	**-0.040041**	**-0.040739**	**-0.042407**
	0.0051	**0.0153**	**0.0012**	**0.0279**	**0.0236**	**0.0181**
$\ln h(-1)$	**0.948196**	**0.939613**	**0.945147**	**0.937295**	**0.938398**	**0.941879**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
GED	**0.960226**	**0.977994**	**1.022280**	**1.083149**	**1.085960**	**1.084714**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.707828	0.716309	0.719390	0.720448	0.720462	0.719724
LIKELIHOOD	-1375.609	-1281.163	-1198.924	-1142.176	-1141.641	-1139.955
OBS	3325	3325	3325	3325	3325	3325

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 12. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	CCC101	**CCC102**	**CCC103**	**CCC104**	**CCC105**	**CCC106**
Constant	0.036499	0.114159	0.115835	0.116927	0.114270	0.115806
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.028618	-0.031959	-0.032811	-0.029062	-0.032816
Monday		0.2561	0.2013	0.2051	0.2626	0.2009
D2		-0.025114	**-0.034436**	**-0.039185**	**-0.036137**	**-0.036547**
Tuesday		0.2218	**0.0934**	**0.0663**	**0.0902**	**0.0830**
D4		**-0.057481**	**-0.058842**	**-0.056085**	**-0.052950**	**-0.056719**
Thursday		**0.0039**	**0.0033**	**0.0065**	**0.0102**	**0.0054**
D5		**-0.055892**	**-0.052076**	**-0.051018**	**-0.047386**	**-0.049588**
Friday		**0.0225**	**0.0345**	**0.0447**	**0.0629**	**0.0482**
D6		**-0.173834**	**-0.169889**	**-0.165352**	**-0.162565**	**-0.160951**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.211535**	**-0.210053**	**-0.210796**	**-0.208428**	**-0.209463**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.777753**	**-0.774463**	**-0.775275**	**-0.774084**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.522779**	**-0.527717**	**-0.515962**	**-0.515423**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2910			**-0.843963**	**-0.848007**	**-0.849187**	**-0.847192**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD3008			**-1.024057**	**-1.033994**	**-1.032563**	**-1.031374**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.417004**	**-0.424201**	**-0.436985**
New Year				**0.0001**	**0.0001**	**0.0001**
DDRAM				0.003806	0.005713	0.002493
Ramadan				0.7750	0.6683	0.8504
DDRFEST				**-0.739095**	**-0.732927**	**-0.736655**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.003694	
Key Events					0.8992	
CHRONO2						0.000736
Key Events						0.9544

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 12. Panel II: EGARCH Estimates (Variance Equation, Restricted Model)
Dependent Variable: Non-cyclical Component of the Daily Data Access Figures (Cycle obtained from the HP Procedure)

	Whole Sample: June 12 1998 – October 31 2007					
	CCC101	**CCC102**	**CCC103**	**CCC104**	**CCC105**	**CCC106**
Constant	**-0.283608**	**-0.277168**	**-0.281887**	**-0.283413**	**-0.284338**	**-0.282599**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\lvert\varepsilon(-1)/\sqrt{h(-1)}\rvert$	**0.263683**	**0.252181**	**0.258325**	**0.264723**	**0.265638**	**0.265522**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	**-0.031838**	**-0.038902**	**-0.043411**	**-0.031846**	**-0.031930**	**-0.031879**
	0.0902	**0.0361**	**0.0140**	**0.0516**	**0.0514**	**0.0544**
$\ln h(-1)$	**0.947695**	**0.947377**	**0.948570**	**0.950896**	**0.950788**	**0.951205**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
GED	**0.939088**	**0.926305**	**0.943362**	**0.971697**	**0.972869**	**0.963570**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.661259	0.668780	0.673228	0.678552	0.678106	0.678463
LIKELIHOOD	-1357.835	-1315.774	-1253.106	-1230.948	-1231.038	-1230.639
OBS	3332	3332	3332	3332	3332	3332

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 13. Panel I: EGARCH Estimates (Mean Equation)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	DDD101	**DDD102**	**DDD103**	**DDD104**	**DDD105**	**DDD106**
Constant	0.024950	0.091555	0.091501	0.091883	0.099024	0.096206
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
D1		-0.013439	-0.023200	-0.023692	-0.026255	-0.028741
Monday		0.6112	0.3781	0.3756	0.3272	0.2852
D2		-0.028656	-0.028475	-0.033354	**-0.041299**	**-0.038944**
Tuesday		0.1850	0.1886	0.1300	**0.0619**	**0.0796**
D4		-0.032607	-0.030765	-0.026876	-0.032189	-0.031166
Thursday		0.1182	0.1398	0.2034	0.1299	0.1437
D5		-0.034139	-0.028123	-0.021154	-0.034273	-0.029192
Friday		0.1873	0.2785	0.4222	0.1949	0.2714
D6		**-0.166152**	**-0.149583**	**-0.142411**	**-0.154523**	**-0.147326**
Saturday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
D7		**-0.213770**	**-0.207106**	**-0.203701**	**-0.213157**	**-0.207777**
Sunday		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD1905			**-0.808369**	**-0.813383**	**-0.809850**	**-0.809317**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2304			**-0.601698**	**-0.614341**	**-0.604854**	**-0.600939**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD2910			**-0.819544**	**-0.840031**	**-0.838933**	**-0.835521**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DD3008			**-0.954988**	**-0.963878**	**-0.969842**	**-0.967184**
National H.			**0.0000**	**0.0000**	**0.0000**	**0.0000**
DDNYR				**-0.465431**	**-0.460177**	**-0.463099**
New Year				**0.0000**	**0.0000**	**0.0000**
DDRAM				0.014962	0.017048	0.016910
Ramadan				0.2882	0.2206	0.2341
DDRFEST				**-0.599761**	**-0.599351**	**-0.594522**
Religious H.				**0.0000**	**0.0000**	**0.0000**
CHRONO					-0.030580	
Key Events					0.3147	
CHRONO2						-0.005326
Key Events						0.6941

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 13. Panel II: EGARCH Estimates (Variance Equation, Restricted Model)
Dependent Variable: Percentage Change of the Daily Data Access Figures

	Whole Sample: June 12 1998 – October 31 2007					
	DDD101	**DDD102**	**DDD103**	**DDD104**	**DDD105**	**DDD106**
Constant	**-0.281109**	**-0.286774**	**-0.284051**	**-0.286679**	**-0.286041**	**-0.290908**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\lvert \varepsilon(-1)/\sqrt{h(-1)} \rvert$	**0.258583**	**0.257480**	**0.260642**	**0.269678**	**0.268999**	**0.271823**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
$\varepsilon(-1)/\sqrt{h(-1)}$	**-0.049835**	**-0.052293**	**-0.055029**	**-0.045514**	**-0.045680**	**-0.045187**
	0.0051	**0.0040**	**0.0010**	**0.0050**	**0.0045**	**0.0050**
$\ln h(-1)$	**0.948196**	**0.944708**	**0.948897**	**0.951000**	**0.951223**	**0.949929**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
GED	**0.960226**	**0.946481**	**0.971845**	**0.986563**	**0.989192**	**0.994015**
	0.0000	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
R2	0.707828	0.716004	0.718434	0.722219	0.722378	0.722134
LIKELIHOOD	-1375.609	-1339.392	-1276.924	-1260.693	-1260.306	-1261.005
OBS	3325	3325	3325	3325	3325	3325

Explanations: (1) The optimal lag order is 36 for the Subsample 1 and 15 for the Subsample 2 as suggested by the Schwarz Information Criterion. (2) Coefficients of the lagged dependent variable are not reported for convenience. Full estimates are available from authors upon request. (3) p-values are provided in parentheses. (4) Estimation has been performed for whole sample, i.e. omitting the two-months of data unavailability period.

Table 14. Panel I: EGARCH Estimates – Monthly Data

	Whole Sample: June 12 1998 – October 31 2007	
	Dependent Variable Y: Percentage Deviation from HP Trend	**Dependent Variable Y: Monthly Percentage Changes**
	Mean Equation	
Constant	-0.025175	0.029175
	0.2994	0.2373
Y(-1)	**0.369297**	**-0.470718**
	0.0005	**0.0000**
Y(-2)	**0.375391**	
	0.0000	
CHRONO2	**0.007288**	0.005914
Key Events	**0.0703**	0.1990
	Variance Equation	
Constant	-0.331501	**-0.452375**
	0.1835	**0.0461**
$\lvert\varepsilon(-1)/\sqrt{h(-1)}\rvert$	0.132450	0.221464
	0.3932	0.2308
$\varepsilon(-1)/\sqrt{h(-1)}$	-0.037995	0.108489
	0.6977	0.4130
$\ln h(-1)$	**0.940816**	**0.923590**
	0.0000	**0.0000**
GED	**2.136213**	**2.731146**
	0.0001	**0.0018**
R2	0.220550	0.232800
LIKELIHOOD	33.82245	29.30726
OBS	111	111

Explanations: (1) The optimal lag order is 2 for the LHS model and 1 for the RHS model as suggested by the Schwarz Information Criterion. (2) p-values are provided in parentheses.

Table 15. Summary of Estimated Models

				Dependent Variable			
				Non-cyclical component of data access		Percentage change in data access	
				Two Subsamples	Whole Sample	Two Subsamples	Whole Sample
OLS Calendar Effects?	Yes			**Table 2**	**Table 8**	**Table 3**	**Table 9**
	No			None	None	None	None
EGARCH Calendar Effects in Mean Equation?	Yes	Calendar Effects in Variance Equation?	Yes	**Table 4**	**Table 10**	**Table 5**	**Table 11**
			No	**Table 6**	**Table 12** **Table 14***	**Table 7**	**Table 13** **Table 14***
	No	Calendar Effects in Variance Equation?	Yes	None	None	None	None
			No	None	None	None	None

(*) Monthly data.